



AI ADVANCEMENT AND ITS GLOBAL IMPACT: ERODING HUMAN RIGHTS IN THE DIGITAL AGE AND THE NEED FOR ROBUST LEGAL SAFEGUARDS

Goranshi Gupta* Kashish Chauhan*

ABSTRACT

The rapid advancement of Artificial Intelligence (AI) has ushered in a new era of technological innovation, transforming industries and societies worldwide. AI is defined as a set of technologies that enable machines to mimic human intelligence and perform complex tasks by leveraging algorithms and data to replicate cognitive function. While on one hand, AI offers significant benefits in efficiency and productivity, its proliferation raises critical concerns regarding the violation of fundamental human rights in the digital age.

This research article explores the intersection of AI development and human rights, with a particular focus on the right to privacy, non-discrimination, and employment. Human rights, which are inherent to all individuals regardless of status, are increasingly threatened by AI-driven systems. In India, the adoption of facial recognition technology and predictive policing tools in the criminal justice system has amplified pre-existing biases, potentially violating constitutional protections. Globally, the unchecked deployment of AI has led to discriminatory outcomes, as evidenced by the disproportionate targeting of marginalised communities and the entrenchment of systemic inequalities.

Furthermore, the automation of labour through AI has contributed to rising unemployment rates, challenging the right to work as enshrined in international instruments such as the Universal Declaration of Human Rights (UDHR),¹ the International Covenant on Economic, Social and Cultural Rights (ICESCR),² and the International Labour Organisation (ILO)³ conventions. The lack of robust data protection frameworks exacerbates these risks, leaving

*BA LLB, FIFTH YEAR, GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY.

*BA LLB, FIFTH YEAR, GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY.

¹ Universal Declaration of Human Rights [1948] UNGA Res 217 A(III), Art.23

² International Covenant on Economic, Social and Cultural Rights [1966], 993 UNTS 3, Art. 6

³ LO Convention No 111 concerning Discrimination in Respect of Employment and Occupation [1958]

individuals vulnerable to surveillance and misuse of personal information. To address these challenges, the article proposes several recommendations: ensuring human oversight in AI systems, promoting transparency, establishing AI regulatory boards at national and international levels staffed by technical experts, and enforcing accountability through stringent legal measures. These steps are essential to safeguard human rights and foster ethical AI development in an increasingly digital world.

Keywords: Artificial Intelligence, Human Rights, Data Protection, Technology, Transparency.

CONCEPT OF ARTIFICIAL INTELLIGENCE AND THE TORONTO DECLARATION

The concept of artificial intelligence (AI), once the domain of science fiction, has rapidly evolved into a central topic of global policy, industry, and academic debate. In recent years, concerns about AI's impact on human rights have moved to the forefront, prompting significant international attention and collaboration. This shift was noticed at the 2018 Rights Con Conference in Toronto, where the declaration was drafted and released. The Declaration, led by Amnesty International and Access Now, is a landmark document emphasising the urgent need to protect human rights—particularly equality and non-discrimination—in the age of machine learning and AI.⁴ The Toronto Declaration recognises both the facets of AI, i.e. potential benefits and the risks attached to it. While machine learning can promote human rights and social progress, it also poses significant dangers, such as algorithmic bias and the risk of discrimination against individuals or groups. The Declaration directs the governments and companies to ensure that AI systems do not replicate existing inequalities, and that those harmed by such systems have access to meaningful remedies. It stresses the importance of grounding AI development and deployment in international human rights law, which provides a binding framework for accountability and redress.⁵

Despite growing research and dialogue, there is still no comprehensive, universally accepted framework to address the complex human rights issues posed by AI. This research gap underscores the need for continued, multidisciplinary efforts to ensure that AI technologies are developed and used in ways that respect and protect fundamental human rights.

⁴ Access Now and Amnesty International, *The Toronto Declaration: Protecting the Rights to Equality and Non-Discrimination in Machine Learning Systems* (2018) <https://www.torontodeclaration.org/> accessed on 6 July 2025.

⁵ *ibid*

In summary, the interplay between AI and human rights is now recognised as a critical area for global governance and ethical scrutiny. The Toronto Declaration and related initiatives mark important steps toward establishing actionable standards, but much work remains to develop holistic frameworks that can effectively safeguard human rights in the rapidly evolving landscape of AI.

VARIOUS DEFINITIONS OF AI AND RESEARCHES CONDUCTED UPON IT

Multiple definitions of AI have been provided by specialists and researchers. There isn't, however, a single, widely recognised definition of AI.

- Marvin Minsky defined AI as “the science of making machines do things that would require intelligence if done by humans.”⁶
- John McCarthy, a renowned academic as well, defined artificial intelligence as “the science and engineering of making intelligent machines.”⁷
- Stuart Russel and Peter Norwing said that “AI are also systems that act like humans, think like humans and can think and act rationally.”⁸

AI is a broad concept with numerous subfields which including voice processing, robotics, machine learning, and vision. These are regarded as the primary areas of AI subfields, not just this time. Artificial Intelligence may spread to non-computer and non-Internet domains. These include logic, probability, psychology, neurology, philosophy, cognitive science, linguistics, etc. Additionally, a phrase known as Narrow AI is currently often employed. This is understood to be the application and use of AI for a specific purpose. This covers things like autonomous cars, picture recognition, and language translation. It has been observed that AI-powered devices may carry out the aforementioned activities more precisely than a human could accomplish. Even scientists are hopeful about what to eventually attain Artificial General Intelligence.

HUMAN RIGHTS AND THE ISSUES ASSOCIATED WITH THEM

The development and deployment of autonomous weapons, including drones, by both state and non-state actors raises significant concerns under the right to life. These systems may not be

⁶ Marvin Minsky, *Semantic Information Processing* (MIT Press 1968).

⁷ John McCarthy, ‘What is Artificial Intelligence?’ (Stanford University, 2007) <http://www-formal.stanford.edu/jmc/whatisai.html> accessed 11 July 2025.

⁸ Stuart Russell and Peter Norvig, *Artificial Intelligence: A Modern Approach* (4th edn, Pearson 2021).

adequately regulated by existing laws of armed conflict, and their malfunction or misuse could result in unintended harm to civilians. Such incidents highlight the need for robust legal frameworks to ensure accountability and prevent violations of the right to life. Sometimes it may so happen that there is an inadequacy of existing domestic laws to combat Human Rights abuses. In such a case, the morality supported by the sense of legitimacy from the perspective of Human Rights is found to carry normative power significantly.

There are various Human Rights and the issues associated with them, and they are envisaged in different international laws such as the International Covenant on Civil and Political Rights (ICCPR),⁹ International Covenant on Economic, Social and Cultural Rights (ICESCR)¹⁰ and European Union Charter of Fundamental Rights (EUCFR).¹¹ There are a lot of adverse impacts of AI on human rights. Some of the global conventions of human rights can be severely impacted due to the adverse effects of AI on human rights.

Right to Privacy: Article 21 of the Constitution of India 1950 guarantees the right to life, which the Supreme Court has interpreted to include the right to privacy.¹² The right to privacy has also been recognised as a fundamental human right by Article 12 of the Universal Declaration of Human Rights.¹³ Article 17 of the International Covenant on Civil and Political Rights,¹⁴ and various other international and regional human rights treaties. In the digital age, while using various social media platforms, most of our personal information is collected with or without our knowledge, and it may be misused. The information that we share with ChatGPT becomes part of the chatbot's data model, and it may be accessed by anyone without our consent. This results in the increased risk of data leakage, and it may violate an organisation's data retention policy.

Law enforcement authorities are presently using Surveillance drones based on AI technology. These AI-powered robots are also used for facial recognition through an intimate process of surveillance. This surveillance helps to target a certain group of persons or a specific person.

⁹ International Covenant on Civil and Political Rights [1966], 999 UNTS

171 <https://www.ohchr.org/en/instruments-mechanisms/instruments/international-covenant-civil-and-political-rights> accessed 11 July 2025.

¹⁰ International Covenant on Economic, Social and Cultural Rights [1966], 993 UNTS

3 <https://www.ohchr.org/en/instruments-mechanisms/instruments/international-covenant-economic-social-and-cultural-rights> accessed 11 July 2025.

¹¹ European Union, Charter of Fundamental Rights of the European Union [2012] OJ C326/391.

¹² Constitution of India 1950; *Justice K S Puttaswamy (Retd) v Union of India* (2017) 10 SCC, Art 21

¹³ Universal Declaration of Human Rights [1948] UNGA Res 217 A(III), Art 12

¹⁴ International Covenant on Civil and Political Rights [1966] 999 UNTS 171, Art 17

This is construed as violative of the “necessary and proportionate” principles required to adhere to state surveillance-governing principles. Thus, robots appear to have influenced to infringe the right to privacy. Technological changes have also had an impact on the military and humanitarian sectors. The growing use of armed drones in conflict, particularly by the United States in Pakistan and Afghanistan, has been frequently condemned as a violation of International Humanitarian Law in a 2010 UN study.¹⁵

The path-breaking judgment in Justice K.S. Puttaswamy (Retd.) v. Union of India¹⁶ was a historic milestone in Indian constitutional law by upholding the right to privacy as a fundamental right under Article 21 of the Constitution, ensuring the right to life and personal liberty. The case itself unfolded against the background of concerns over the Aadhaar biometric identification scheme and its potential threat to personal privacy. A nine-judge bench of the Supreme Court ruled unanimously that privacy is a part of human dignity and personal autonomy, and therefore forms an essential component of the freedoms guaranteed under Part III of the Constitution.

Right to Work: The automation of jobs through AI-powered systems can lead to significant job displacement, adversely affecting the right to work. This raises concerns about unemployment and the need for policies that address the social and economic impacts of AI-driven automation. Article 23 of the Universal Declaration of Human Rights,¹⁷ Article 6 of the ICESCR,¹⁸ and Article 1(2) of the International Labour Organisation¹⁹ all provide the right to work and protection from unemployment. Though the rapid advancement of AI has increased the efficiency of machines and services, it has also led to the replacement of human labour, raising the issue of unemployment.

Right to Education: The utilisation of robot technology in the field of education is considered an active area for research. However, this idea is still in the beginning stage. However, this application is violative of the principle of “equal access”. In areas where this technology is in use, the students there might be taught by robots replacing teachers. Thus, students would get

¹⁵ Philip Alston, *Report of the Special Rapporteur on Extrajudicial, Summary or Arbitrary Executions*, Philip Alston [2010] UN Doc A/HRC/14/24/Add.6

¹⁶ *Justice K S Puttaswamy (Retd) v Union of India* [2017] 10 SCC 1

¹⁷ Universal Declaration of Human Rights [1948] UNGA Res 217 A(III), Art 23

¹⁸ International Covenant on Economic, Social and Cultural Rights [1976] 993 UNTS 3, Art 6

¹⁹ Constitution of the International Labour Organization [1948], Art 1(2)

a separate type of education compared to the students who are taught by teachers. This might give rise to a violation covering “equal access”.

Prohibition of Discrimination: Article 15 of the Indian Constitution bars discrimination based on religion, race, caste, sex, or place of birth.²⁰ However, with the rise of artificial intelligence in our everyday societies, concerns around discrimination and systemic racism have become increasingly significant in political debates surrounding technological development.

Article 2 of the Universal Declaration of Human Rights²¹ and Article 2 of the International Covenant on Civil and Political Rights²² Both provide that individuals are entitled to all rights and freedoms without discrimination. AI and face-recognition systems have failed to provide equality in a context where there exists discrimination towards black individuals.

In 2015, Google Photos—an advanced image recognition tool—wrongly labelled a photo of two Black individuals as gorillas. Similarly, when the term ‘Black females’ was entered into Google’s search bar, the algorithm generated sexually explicit results. Additionally, researchers found that a healthcare algorithm used to assess which patients needed further treatment underestimated the medical needs of Black patients. While movements like Black Lives Matter continue to push for the protection and upliftment of Black communities, the growing integration of AI in society is reinforcing digital biases and perpetuating the very harms these movements seek to combat. As a result, technology is disproportionately affecting marginalised groups by amplifying the discriminatory patterns already present in society.

Freedom of Speech and Expression: Pegasus is a type of spyware that infiltrates both iPhones and Android devices, enabling its operators to access messages, photos, and emails, record phone conversations, and covertly turn on microphones. In November 2021, the Indian government faced allegations of using this spyware to surveil key opposition leaders, journalists, activists, and others. This has heightened public anxiety about being watched and has created a chilling effect on the exercise of fundamental rights, particularly the freedom of speech and expression.²³ AI-driven digital bots have emerged as a new method for targeting and intimidating marginalised groups and dissenting voices online. These hard-to-detect fake

²⁰ Constitution of India [1950], Art 15

²¹ Universal Declaration of Human Rights [1948] UNGA Res 217 A(III)), Art 2

²² International Covenant on Civil and Political Rights [1976] 999 UNTS 171, Art 2

²³ Amnesty International, ‘Pegasus spyware: Surveillance of activists, journalists, lawyers and political figures in India’ [2021] <https://www.amnesty.org/en/latest/news/2021/07/india-pegasus-spyware-surveillance/> accessed 12 July 2025.

accounts mimic real users and automatically reply to specific individuals or opinions, thereby undermining the right to freely express one's views.

SUGGESTIONS ON THE USE OF ARTIFICIAL INTELLIGENCE BY GOVERNMENT AND PRIVATE BUSINESSES

It is a well-established fact that governments are required to uphold human rights. It is the government's duty and responsibility to uphold, defend, advance, and implement human rights, concentrating on current international law. The government has a responsibility to prevent abuses, and it should be watchful to ensure that the people are free to exercise their human rights without any kind of hindrance. This Research Article highlights and recommends the type of framework that the government of any country needs to articulate for the overall protection of the Human Rights of its citizens, which are as follows-

Comprehensive Data Protection Mechanism: The majority of the risk of AI threats to human rights can be easily anticipated and eventually mitigated by implementing a comprehensive and practical data protection mechanism. Thus, the data protection architecture needs to be explained.

Set Accountability and Procedures to Remedy: Governments are expected to develop policies about automated procedures with an emphasis on how they affect human rights. Setting accountability standards is an integral part of any new technology so as to punish the infringer upon infringement of human rights.

The following concerns should be given special attention to ensure accountability and proper corrections:

- AI system operators need to be properly trained. The staff members assigned to oversee and operate the AI system need to be alert to comprehend how AI functions, what the range of applications for AI is, and what damage AI is likely to cause.
- Although systems are implemented transparently, there is still a possibility of human rights violations. Therefore, in order to address this violation, the impacted parties must have the ability to contest AI's use of them to seek a suitable remedy.²⁴

²⁴ United Nations Office of the High Commissioner for Human Rights, 'Procurement and deployment of artificial intelligence must be aligned with human rights: UN experts' [2025] <https://www.ohchr.org/en/press->

Sanction Human Rights Impact Assessments: Governments must conduct in-depth research on AI systems to identify risks to human rights before developing them. This would pinpoint risks that include dangers arising from AI-based monitoring operations that negatively impact human rights. The following needs to be part of the AI assessment process:

- A third party using an AI system should be included in the assessment process.
- For a specific and special application of an AI system, new legal protection may be needed.
- Special identification of AI-bias, especially in criminal proceedings, is to be achieved.
- Auditing and testing are to be done by impartial experts.

Ensuring Openness and Clarity: Governments must guarantee sufficient transparency, which includes a transparent approach to the goal, the mechanism of use, etc. Additionally, the capacity for explanation and transparency would encompass the following:

- Notification is to be done when the AI system used by the governments takes a decision that might affect Human Rights.
- “Black Box Systems” are to be avoided.

Proper and Adequate Financing: The development of mechanisms to address these complex issues must receive the proper financing.

DATA PROTECTION LAWS

It is widely believed that many of the risks and threats AI poses to human rights can be effectively and practically managed through data protection laws. There will be suitable uses for these laws in both the public and private spheres. In AI, data is the main problem.

Any legislation about data protection will inevitably involve AI systems. When analysing the effects of the European General Data Protection Regulation (GDPR), it becomes clear that this regulation offers a friendly framework for managing and safeguarding personal data as well as providing appropriate information to individuals about how their data is being used.

The GDPR offers a mechanism for restricting data processing and permits the use of data for certain allowable purposes as long as suitable data protection measures are in place, especially

[releases/2025/06/procurement-and-deployment-artificial-intelligence-must-be-aligned-human](#) accessed 11 July 2025.

for sensitive data. This law has made provision to use data only with the data subject's consent. This aids in limiting how personal information is used. Through the protection of personal data, the GDPR makes provisions for preventing the unjustified use of AI that compromises individual rights. According to some experts, data protection laws are out of date when it comes to AI. Expanding the protection mechanisms needs to be a priority in order to prevent undue obstacles to the development and application of AI for good.

If it is noted that AI is taking decisions on the basis of such logic that cannot be explained by the developers themselves, it is apprehended that such decisions might lead to negative consequences. Data security rights offer the means to guarantee the kind of accountability framework that could lessen harms.

India is one nation with a lot of data. Therefore, appropriate and consistent data protection laws are required in India. In 2018, the Srikrishna committee was established in India to address this.²⁵ A data protection bill, 2018, has been proposed by this committee (Sumanjeet, 2010).²⁶ Its conversion into an act will aid in preventing the improper use of personal information that could compromise someone's privacy. India has already drafted the Information Technology Act (IT Act) 2000,²⁷ which includes some provisions to limit the misuse of data.²⁸

DATA PROTECTION RIGHTS AND ARTIFICIAL INTELLIGENCE

The right to information gives data subjects access to details about the kinds of data being collected, how they are being collected, why they are being collected, and whether or not they will be used to support automated decision-making. Everything that aids in raising public awareness of the impact of AI on society. People are made aware of the precise implications for violations of human rights by this information.

Furthermore, knowledge empowers individuals to take proactive measures to require organisations that use personal data to be more open about the development and application of

²⁵ Committee of Experts on Data Protection Framework for India, *Report of the Committee of Experts on Data Protection Framework for India* (Ministry of Electronics and Information Technology, Government of India)[2018] https://meity.gov.in/writereaddata/files/Data_Protection_Committee_Report.pdf accessed 12 July 2025

²⁶ Ministry of Electronics and Information Technology, *The Personal Data Protection Bill [2018]* https://meity.gov.in/writereaddata/files/Data_Protection_Bill_2018.pdf accessed 12 July 2025

²⁷ Information Technology Act [2000]

²⁸ EY, 'Digital Personal Data Protection Rules [2025]' https://www.ey.com/en_in/insights/cybersecurity/transforming-data-privacy-digital-personal-data-protection-rules-2025 accessed 11 July 2025

AI. The right to rectification, which is a component of data protection rights, gives data subjects the opportunity to change information that is held by a third party if it is discovered to be inaccurate, incomplete, or incorrect. This privilege helps to lessen the impact of errors in AI systems. The right to restrict processing gives data subjects the ability to ask an organisation that uses their data to limit or cease using that information.

Moreover, data protection rights provide another scope to individuals. The right to erasure is this. If data subjects discover that their provided information is being misused or used for purposes other than those for which it was intended, they can use this right to have it deleted. This right also includes the freedom for people to demand that the organisation use their personal information to compel the agency to use AI systems more responsibly. The right to an explanation allows data subjects to request an explanation from the agency about how it is making decisions based on the data provided, using their personal information. In addition to increasing transparency, this would inform data subjects about AI-based decision-making processes.

As stated in data protection laws, the right to object allows data subjects to object to the use of their personal information by agencies when that information is used for direct marketing purposes or when the agency is using AI to assist in making decisions based on those data or when the agency is perceived to have utilised those data for the agency justifiable purposes.

CONCLUSION

Artificial intelligence is a part of modern people's daily lives. The introduction of AI has drastically altered how businesses and the government operate. Although there have been many advantages from this shift that made AI possible, over time, it has introduced several complex issues that are endangering human rights. It is a fact that regulations about data protection, accountability, and transparency have been able to significantly reduce violations of human rights, though they have not eliminated them. As AI technology advances, it broadens its range of applications and grows increasingly complex, creating new potential points of vulnerability for the misuse of human rights. To deal with the raging circumstances, further study is required to protect human rights. Some suggestions for defending human rights against the expanding use of AI technology have been outlined in this article. It is hoped that using AI without violating human rights won't be impossible if governments and businesses heed these recommendations.